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| 09/748,849 | 12/28/2000 | Yoshihisa Harada | DP-696 US | 6089 |
| 21254 | 7590 | 08/18/2005 | EXAMINER | |
| MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817 | | | EDELMAN, BRADLEY E | |
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| | | | 2153 | |

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/748,849

Applicant(s)

HARADA, YOSHIHISA

Examiner

Bradley Edelman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to Applicant's amendments and request for reconsideration filed on May 25, 2005. Claims 1-24 are presented for examination. Claims 1, 3, 5-8, 10-16, 18-22, and 24 have been amended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-4, 7-11, 14, 18-20, and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Sharma et al. (U.S. Patent No. 6,182,109, hereinafter "Sharma").

In considering claim 1, Sharma discloses a server ("server") comprising:

Processing means ("thread pool") for processing data transferred from plural clients ("clients," col. 23, lines 20-25);

Comparing means for comparing with a designated value ("MaxThreads") an amount of received load corresponding to each received data transferred from a plurality of clients (col. 23, lines 32-36, 60-63; col. 24, lines 2-7, "test step" compares the received load to the MaxThreads value); and

A judging means for judging whether a part of said each received data should be discarded prior to receipt of at least a portion of said amount of received load by said processing means of said server (col. 24, lines 16-24, "the client request is rejected" before the request is received by the thread pool);

Wherein said server controls said received load corresponding to said each received data transferred from said plural clients based on a judged result of said judging means (col. 24, lines 18-19, "thus the server administers client session admission control to avoid an overload situation").

In considering claim 2, Sharma further discloses that the designated value is set based on a receiving capacity of said processing means of said server (col. 23, lines 32-36; wherein the maximum number of threads allocated corresponds to the "peak load of clients without overloading the server system").

Claim 3 contains no further limitations over claim 1 and is thus rejected for the same reason.

In considering claim 4, Sharma further discloses that the comparing means discards a part of said received data exceeding said received load based on a judged result prior to receipt of said at least portion of said received load by said processing means of said server ("reject the client request," col. 24, lines 16-24).

Claim 7 contains no further limitations over claim 1 and is thus rejected for the same reason.

Claim 8 is disclosed by Sharma in the same sections described with regard to claim 1, and is thus rejected for the same reason.

In considering claim 9, Sharma further discloses that the designated value is set based on a receiving capacity of said processing unit of said server (col. 23, lines 32-36; wherein the maximum number of threads allocated corresponds to the "peak load of clients without overloading the server system").

Claim 10 is disclosed by Sharma in the same sections described with regard to claim 1, and is thus rejected for the same reason.

Claim 11 is disclosed by Sharma in the same sections described with regard to claim 4, and is thus rejected for the same reason.

In considering claim 14, claim 14 contains no further limitations over claims 10 and 11 combined, and is thus rejected for the same reasons.

Claim 18 contains no further limitations over claim 1 and is thus rejected for the same reason.

Claim 19 contains no further limitations over claim 1 and is thus rejected for the same reason.

In considering claim 20, Sharma discloses a received load control method comprising:

Setting a shaper value ("MaxThreads") corresponding to a data receiving capacity of a processing unit of a server (col. 23, lines 32-33, "maximum number of threads [on a server] reserved to service client requests");

Transmitting said amount of each received data to said processing unit if said amount of received data is less than said shaper value (col. 24, lines 3-10, "determine whether the maximum number of threads would be exceeded if the client request were granted" and if not, then assigning the client port to process the received data); and

Transmitting said amount of said each received data to said processing unit if said amount of received data is not less than said shaper value (col. 24, lines 3-10, "determine whether the maximum number of threads would be exceeded if the client request were granted" and if not - i.e. the amount of received data is equal to, but not less than the shaper value - then assigning the client port to process the received data).

In considering claim 22, Sharma further discloses that the received data comprises a packet (col. 8, lines 41-45, wherein TCP/IP uses packets such that requests will be sent as packets).

In considering claim 23, Sharma further discloses that the designated value is set based on a receiving capacity of said processing means of said server and a predetermined margin of receiving capacity of said processing means of said server (col. 23, lines 20-35, wherein an administrator can set the MaxThreads value at any value, which would include whatever margin he/she pleases in order to ensure that the server system does not become overloaded).

Claim 24 contains no further limitations over claim 1 and is thus rejected for the same reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma, in view of what was well known in the art at the time the invention was made.

In considering claim 17, Sharma further discloses that the "shaper" value (i.e. maximum number of active threads that should be supported by the server) can be set by a network administrator with a user configuration program (col. 23, lines 23-26). However, Sharma does not disclose that the administrator can set the value from

equipment disposed outside of the server. Sharma actually remains silent regarding where the administrator might be located. Nonetheless, Examiner takes official notice that servers can be managed from remote locations. Thus, a person having ordinary skill in the art would have readily recognized the desirability and advantages of allowing the administrator in the system taught by Sharma to configure the server from a remote location, so that the administrator can save the travel expenses incurred by being forced to travel to the server in order to configure it. Thus, it would have been obvious to set the shaper value in the system taught by Sharma from equipment outside the server.

3. Claims 5, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma, in view of Fodor et al. (U.S. Patent No. 6,438,104, hereinafter "Fodor").

In considering claim 5, although the system taught by Sharma teaches substantial features of the claimed invention, it does not teach the claimed early packet discard feature. Nonetheless, early packet discard features are well known in load balancing systems, as evidenced by Fodor (note: Applicant's specification also admits that early packet discard is well-known, and as a result gives little, if any, explanation regarding how to implement such a feature – see p. 11 of the specification, lines 8-10 which states "by utilizing an EPD (early packet discard) being an existing technology, the receiving efficiency can be increased"). Fodor describes a load balancing system for limiting the number of packets received at servers throughout the network, wherein one method used to limit the number of packets is early packet discard (col. 1, line 58 –

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col. 2, line 8). Given the teaching of Fodor, a person having ordinary skill in the art would have readily recognized the desirability and advantages of using early packet discard for the requests in the system taught by Sharma, to eliminate receipt of unnecessary message packets, thereby saving additional bandwidth at the server. Therefore, it would have been obvious to use early packet discard for the data packets taught by Sharma.

In considering claim 12, claim 12, presents the same limitation as claim 5, and is thus rejected for the same reasons.

In considering claim 15, claim 15 presents a method for performing the same step as described in claim 12, and is thus rejected for the same reasons.

4. Claims 6, 13, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma, in view of Cherkasova et al. (U.S. Patent No. 6,360,270, hereinafter "Cherkasova").

In considering claims 6, 13, and 16, although Sharma discloses substantial features of the claimed invention, it fails to disclose discarding part of each received data by utilizing a QoS based on low priority. Nonetheless, selecting which packets to discard based on QoS is well known, as evidenced by Cherkasova. Cherkasova discloses a system for controlling the load at a server, wherein when a shaper judges that the amount of said received load exceeds said shaper value and discards a part of

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the received data, a part of said received data is discarded from a packet including a low priority by utilizing a QoS based on an order of priority to each of said received data (col. 3, lines 20-25, "quality of service"; and col. 5, lines 9-21, describing that certain message packets, such as new packets, are accepted before others, such as packets relating to existing sessions, thereby establishing packet priority). Given this teaching, it would have been obvious to a person having ordinary skill in the art to include a QoS feature in the system taught by Sharma to better control which data should be accepted by the server.

Note: because Sharma discloses discarding the entire request, it necessarily also discloses discarding part of the request.

In considering claim 21, Cherkasova further discloses outputting the value to a shaper and that the shaper means discards a remaining part of the amount of received data that exceeds the shaper value based on the judged result (col. 5, lines 58-62; col. 4, lines 50-55, wherein unaccepted messages are sent to the deferral manager, and are discarded from the server). It would have been obvious to include this feature in the Sharma system to more efficiently control the load at the server.

Response to Arguments

Initial note: Examiner respectfully disagrees with Applicant's statements regarding the purpose of the present claim amendments. Notably, in Applicant's remarks filed on May 17, 2005, Applicant states that "the claim amendments are made

only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability" (see p. 10, lines 5-7). However, Applicant's arguments later explicitly distinguish the amended claims from the previously cited prior art by focusing on the amended claim language (i.e. by underlining and bolding the term "each," which was added to all independent claims as a distinguishing feature of Applicant's invention; see p. 17, last paragraph). Thus, according to the claim language itself, and according to Applicant's arguments, the claims have in fact been narrowed in scope for the purpose of overcoming the prior art of record.

In Applicant's response filed on May 17, 2005, the following factual arguments are noted.

- a. Sharma discloses rejecting the whole client request, or the entire client request, and not a part of the client request as required by the claims.
- b. Cherkasova does not disclose comparing an amount of received load corresponding to each received data which is transferred from the plural clients, as required in the amended claims.

In considering (a), Applicant contends that Sharma discloses rejecting the whole client request, or the entire client request, and not a part of the client request as required by the claims. Examiner respectfully disagrees with this argument. Notably, the claim language merely states "judging whether a part of said each received data

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should be discarded....” It does not require judging *only* a part of the received data. In other words, the whole includes all parts of the whole. So by rejecting the whole request as Applicant admits Sharma discloses, Sharma necessarily also discloses rejecting part of each request.

Unfortunately, the present claims do not embody the invention that seems to be argued by Applicant. It appears that Applicant's arguments attempt to treat the claim language as if it described rejecting *only* a portion of the entire received data but not the entire received data. However, the claims do not require such a limitation. For these reasons, claims 1-4, 7-11, 14, 18-20, and 22-24 remain rejected in view of Sharma.

In considering (b), Applicant contends that Cherkasova does not disclose comparing an amount of received load corresponding to each received data which is transferred from the plural clients, as required in the amended claims. Examiner agrees, and has withdrawn the rejections based on Cherkasova alone.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is 571-272-3953. The examiner can normally be reached from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached at 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BE
August 16, 2005

Bradley Edelman